Search

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     FILE 'CAPLUS, WPIX' ENTERED AT 16:44:19 ON 23 AUG 2004
               E WO99-US14983/AP,PRN
L1             0 SEA ABB=ON  PLU=ON  WO99-US14983/AP
L2             1 SEA ABB=ON  PLU=ON  WO99-US14983/AP
     TOTAL FOR ALL FILES
L3             1 SEA ABB=ON  PLU=ON  WO99-US14983/AP
                 D ALL
L4          101230 SEA ABB=ON  PLU=ON  METAL? (5A) COAT?
L5           79624 SEA ABB=ON  PLU=ON  METAL? (5A) COAT?
     TOTAL FOR ALL FILES
L6          180854 SEA ABB=ON  PLU=ON  METAL? (5A) COAT?
L7             147 SEA ABB=ON  PLU=ON  L4 AND (?SILANE? (5A) ?PRIMER?)
L8              57 SEA ABB=ON  PLU=ON  L5 AND (?SILANE? (5A) ?PRIMER?)
     TOTAL FOR ALL FILES
L9             204 SEA ABB=ON  PLU=ON  L6 AND (?SILANE? (5A) ?PRIMER?)
L10            196 DUP REM L9 (8 DUPLICATES REMOVED)
L11            147 SEA L10
L12              0 SEA ABB=ON  PLU=ON  L11 AND ((CHEMICAL? OR ACID? OR OXIDIZ?)
                   (5A) (ROUGH?))
L13             49 SEA L10
L14              0 SEA ABB=ON  PLU=ON  L13 AND ((CHEMICAL? OR ACID? OR OXIDIZ?)
                   (5A) (ROUGH?))
     TOTAL FOR ALL FILES
L15              0 SEA ABB=ON  PLU=ON  L10 AND ((CHEMICAL? OR ACID? OR OXIDIZ?)
                   (5A) (ROUGH?))
L16            147 SEA L10
L17              0 SEA ABB=ON  PLU=ON  L16 AND ((CHEMICAL? OR ACID? OR OXIDIZ?)
                   (5A) (?ROUGH?))
L18             49 SEA L10
L19              1 SEA ABB=ON  PLU=ON  L18 AND ((CHEMICAL? OR ACID? OR OXIDIZ?)
                   (5A) (?ROUGH?))
     TOTAL FOR ALL FILES
L20              1 SEA ABB=ON  PLU=ON  L10 AND ((CHEMICAL? OR ACID? OR OXIDIZ?)
                   (5A) (?ROUGH?))
                 D ALL
L21            147 SEA L10
L22              8 SEA ABB=ON  PLU=ON  L21 AND ((CHEMICAL? OR ACID? OR OXIDIZ?)
                   (5A) (?TREAT?))
L23             49 SEA L10
L24              1 SEA ABB=ON  PLU=ON  L23 AND ((CHEMICAL? OR ACID? OR OXIDIZ?)
                   (5A) (?TREAT?))
     TOTAL FOR ALL FILES
L25              9 SEA ABB=ON  PLU=ON  L10 AND ((CHEMICAL? OR ACID? OR OXIDIZ?)
                   (5A) (?TREAT?))
L26              9 FOCUS L25 1-
                 D 1-9 ALL RN
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L26 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:293774 CAPLUS
DN 136:326995
ED Entered STN: 19 Apr 2002
TI Method for pretreating and/or **coating metallic** surfaces with a paint-like **coating** prior to forming and use of substrates coated in this way
IN Jung, Christian; Schimakura, Toshiaki; Maurus, Norbert; Domes, Heribert
PA Chemteall Gmbh, Germany
SO PCT Int. Appl., 146 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C09D005-00
ICS C09D005-08
CC 42-2 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55, 56
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002031064	A1	20020418	WO 2001-EP11737	20011010
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2001095609	A5	20020422	AU 2001-95609	20011010
	EP 1328590	A1	20030723	EP 2001-976296	20011010
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2004062873	A1	20040401	US 2003-362403	20030909
PRAI	DE 2000-10050537	A	20001011		
	DE 2001-10110830	A	20010306		
	DE 2001-10119606	A	20010421		
	DE 2001-10127721	A	20010607		
	WO 2001-EP11737	W	20011010		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002031064	ICM	C09D005-00
	ICS	C09D005-08
US 2004062873	ECLA	C09D005/00B; C09D005/08; C09D005/08B4

AB The invention relates to a method for **coating** a **metallic** strip. The strip or optionally, the strip sections produced from said strip in the subsequent process, is/are first coated with at least one anticorrosion layer - according to an alternative form of embodiment, this can be left out - and then with at least one layer of a paint-like coating containing polymers. After being coated with at least one anticorrosion layer or after being coated with at least one layer of a paint-like coating, the strip is divided into strip sections. The coated strip sections are then formed, joined and/or coated with at least one (other) paint-like coating and/or paint coating. The paint-like coating is formed by coating the surface with an aqueous dispersion containing the following in addition to water: (a) at least one organic film former containing at least one water-soluble or water-dispersed polymer with an acid value of 5 to 200; (b) at least one inorg. compound in particle form with an average particle diameter measured on a

scanning electron microscope of 0.005 to 0.3 μm; and (c) at least one lubricant and/or at least one corrosion inhibitor. The **metallic** surface that is optionally **coated** with at least one anticorrosion layer is brought into contact with the aqueous composition and a film containing particles is formed on the metallic surface, this film then being dried and optionally also hardened, the dried and optionally, also hardened film having a layer thickness of 0.01 to 10 μm. The speed of **coating metal** objects with complex profiles is high using this process and need of Cr6+ compds. and acids is reduced. The coated products are useful in manufacture of automobile bodies, aircraft, and spacecraft.

ST **acidic** polymer water thinned **pretreatment** **metal** substrate anticorrosive **coating**; spacecraft **metal** substrate anticorrosive **coating**; aircraft **metal** substrate anticorrosive **coating**; automobile body **metal** substrate anticorrosive **coating**; chromium free inorg compd pretreatment **metal** substrate anticorrosive **coating**; lubricant pretreatment **metal** substrate anticorrosive **coating**

IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic-polyurethane-; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Alcohols, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(amino, corrosion inhibitor; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Polysiloxanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Alcohols, uses
Phosphates, uses
Silanes
RL: TEM (Technical or engineered material use); USES (Uses)
(anticorrosive **primer**; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Coating materials
(anticorrosive, water-thinned; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Automobiles
(bodies; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(carboxy-containing; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Coating process
(coil; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Conducting polymers
(corrosion inhibitor; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to

forming for prevention of corrosion of formed coated product)

IT Thiols (organic), uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(corrosion inhibitor; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Minerals, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(hydrotalcite-group; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Polysiloxanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polyester-; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Acrylic polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyester-polyurethane-; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polysiloxane-; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Aircraft
Space vehicles
(pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Carbonates, uses
Oxides (inorganic), uses
Paraffin waxes, uses
Rare earth oxides
Silicates, uses
Sulfates, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Aminoplasts
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Polyurethanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Galvanized steel
RL: MSC (Miscellaneous)
(substrate; pretreating and/or **coating metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Adhesives
Inks
(top layer; pretreating and/or **coating metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT Aluminum alloy, base
Copper alloy, base
Iron alloy, base
Magnesium alloy, base
Nickel alloy, base
Tin alloy, base
Titanium alloy, base
Zinc alloy, base
RL: MSC (Miscellaneous)
(substrate; pretreating and/or **coating metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(Galvalume-plated, substrate; pretreating and/or **coating metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 9003-01-4, Polyacrylic **acid**
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer; **pretreating** and/or **coating metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 598-62-9, Manganese carbonate 674-70-4 674-71-5 763-26-8 919-30-2, 3-**Aminopropyltriethoxysilane** 1429-50-1, Ethylenediaminetetramethylenephosphonic **acid** 3071-50-9 4546-06-9, p-Xylylenediphosphonic **acid** 4671-77-6, 1,4-Butanediphosphonic **acid** 4721-22-6, 1,6-Hexanediphosphonic **acid** 5943-21-5, 1,10-Decanediphosphonic **acid** 5943-66-8, 1,8-Octanediphosphonic **acid** 6419-19-8, Aminotrimethylenephosphonic **acid** 7429-90-5D, Aluminum, compds. 7439-89-6D, Iron, compds. 7439-95-4D, Magnesium, compds. 7439-96-5D, Manganese, compds. 7439-98-7D, Molybdenum, compds. 7440-02-0D, Nickel, compds. 7440-32-6D, Titanium, compds. 7440-33-7D, Tungsten, compds. 7440-47-3D, Chromium, compds. 7440-48-4D, Cobalt, compds. 7440-58-6D, Hafnium, compds. 7440-67-7D, Zirconium, compds. 7450-59-1, 1,12-Dodecanediphosphonic **acid** 11101-13-6 12021-95-3 12781-95-2 15827-60-8, Diethylenetriaminepentamethylenephosphonic **acid** 16068-37-4, 1,2-Bis(triethoxysilyl)ethane 21645-51-2, Aluminum hydroxide, uses 23605-74-5 37971-36-1, 2-Phosphonobutane-1,2,4-tricarboxylic **acid** 50421-68-6 74748-16-6 85590-01-8 151861-26-6 159239-33-5, 12-Mercaptododecylphosphonic **acid** 198065-35-9, 12-(Ethylamino)dodecanephosphonic **acid** 210237-15-3 216106-45-5 378232-64-5 412916-50-8 412916-52-0 412916-54-2
RL: TEM (Technical or engineered material use); USES (Uses)
(anticorrosive **primer**; **pretreating** and/or **coating metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 50-21-5D, Lactic **acid**, titanium complexes 4619-20-9D, zirconium complexes 7585-20-8, Zirconium acetate 7789-09-5, Ammonium dichromate 15879-01-3, Triethanolamine titanate 22829-17-0, Ammonium zirconium carbonate 38497-57-3, Titanium acetate 73215-17-5

133962-46-6
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(corrosion inhibitor; **pretreating** and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 1306-38-3, Cerium dioxide, uses 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconia, uses 1314-36-9, Yttrium oxide, uses 1343-98-2, Silicic **acid** 1344-28-1, Aluminum oxide, uses 7439-91-0D, Lanthanum, compds. 7440-70-2D, Calcium, compds. 7631-86-9, Silica, uses 7727-43-7, Barium sulfate 13463-67-7, Titania, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**pretreating** and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 79-10-7D, Acrylic acid, esters, polymers with epoxy group-containing compds. 9002-89-5, Polyvinyl alcohol 9003-39-8, Polyvinylpyrrolidone 9010-77-9, Ethylene-acrylic **acid** copolymer 9011-05-6, Urea resin 25608-40-6, Polyaspartic **acid** 26063-13-8, Polyaspartic **acid** 59269-51-1, Polyvinylphenol
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(**pretreating** and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 9003-55-8D, Butadiene-styrene copolymer, carboxy derivs.
RL: TEM (Technical or engineered material use); USES (Uses)
(pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 62112-96-3, Galvalume 66184-45-0, ST 1405, miscellaneous
RL: MSC (Miscellaneous)
(substrate; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 9002-86-2, PVC
RL: TEM (Technical or engineered material use); USES (Uses)
(top layer; pretreating and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

IT 9002-88-4D, Polyethylene, **oxidized** 9003-07-0, Polypropylene
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(wax; **pretreating** and/or **coating** **metallic** surfaces with a paint-like **coating** prior to forming for prevention of corrosion of formed coated product)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Basf Corp; EP 0551568 A 1993 CAPLUS
(2) Jose, B; US 5700523 A 1997 CAPLUS
(3) Kawasaki Steel Co; EP 0344717 A 1989 CAPLUS
(4) Rivera, J; US 5905105 A 1999 CAPLUS

RN 12597-69-2
RN 9003-01-4
RN 598-62-9
RN 674-70-4
RN 674-71-5
RN 763-26-8
RN 919-30-2
RN 1429-50-1
RN 3071-50-9
RN 4546-06-9
RN 4671-77-6

RN 4721-22-6
RN 5943-21-5
RN 5943-66-8
RN 6419-19-8
RN 7429-90-5D
RN 7439-89-6D
RN 7439-95-4D
RN 7439-96-5D
RN 7439-98-7D
RN 7440-02-0D
RN 7440-32-6D
RN 7440-33-7D
RN 7440-47-3D
RN 7440-48-4D
RN 7440-58-6D
RN 7440-67-7D
RN 7450-59-1
RN 11101-13-6
RN 12021-95-3
RN 12781-95-2
RN 15827-60-8
RN 16068-37-4
RN 21645-51-2
RN 23605-74-5
RN 37971-36-1
RN 50421-68-6
RN 74748-16-6
RN 85590-01-8
RN 151861-26-6
RN 159239-33-5
RN 198065-35-9
RN 210237-15-3
RN 216106-45-5
RN 378232-64-5
RN 412916-50-8
RN 412916-52-0
RN 412916-54-2
RN 50-21-5D
RN 4619-20-9D
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RN 15879-01-3
RN 22829-17-0
RN 38497-57-3
RN 73215-17-5
RN 133962-46-6
RN 1306-38-3
RN 1314-13-2
RN 1314-23-4
RN 1314-36-9
RN 1343-98-2
RN 1344-28-1
RN 7439-91-0D
RN 7440-70-2D
RN 7631-86-9
RN 7727-43-7
RN 13463-67-7
RN 79-10-7D
RN 9002-89-5
RN 9003-39-8
RN 9010-77-9
RN 9011-05-6
RN 25608-40-6
RN 26063-13-8

RN 59269-51-1
RN 9003-55-8D
RN 62112-96-3
RN 66184-45-0
RN 9002-86-2
RN 9002-88-4D
RN 9003-07-0

L26 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:293775 CAPLUS
DN 136:326996
ED Entered STN: 19 Apr 2002
TI Method for pretreating and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming and use of substrates coated in this way
IN Shimakura, Toshiaki; Bittner, Klaus; Domes, Heribert; Wietzoreck, Hardy; Jung, Christian
PA Chemteall Gmbh, Germany
SO PCT Int. Appl., 115 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C09D005-00
CC 42-2 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55, 56
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002031065	A2	20020418	WO 2001-EP11738	20011010
	WO 2002031065	A3	20020627		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002015940	A5	20020422	AU 2002-15940	20011010
	EP 1330499	A2	20030730	EP 2001-986707	20011010
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2004009300	A1	20040115	US 2003-362388	20030701
PRAI	DE 2000-10050532	A	20001011		
	DE 2001-10110830	A	20010306		
	DE 2001-10119606	A	20010421		
	WO 2001-EP11738	W	20011010		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002031065	ICM	C09D005-00

AB The invention relates to a method for **coating** a **metallic** strip. The strip or optionally, the strip sections produced from said strip in the subsequent process, is/are coated first with at least one anticorrosion layer and then with at least one layer of a paint-like coating containing polymers and/or with at least one paint coating. After being coated with at least one anticorrosion layer or after being coated with at least one layer of a paint-like coating and/or with at least one paint coating, the strip is divided into strip sections. The coated strip sections are then formed, joined and/or coated with at least one (other) paint-like coating and/or paint coating. At least one of the anticorrosion layers is formed by coating the surface with an aqueous dispersion containing the following in addition to water: (a) at least one organic

film former containing at least one water-soluble or water-dispersed polymer; (b) a quantity of cations and/or hexa- or tetrafluoro complexes of cations chosen from a group consisting of titanium, zirconium, hafnium, silicon, aluminum and boron; and (c) at least one inorg. compound in particle form with an average particle diameter measured on a scanning electron microscope of 0.005 to 0.2 μm. The clean metallic surface is brought into contact with the aqueous composition and a film containing particles is formed on the metallic surface, this film then being dried and optionally also hardened, the dried and optionally, also hardened film having a layer thickness of 0.01 to 10 μm. The speed of **coating metal** objects with complex profiles is high using this process and need of Cr6+ compds. and acids is reduced. The coated products are useful in manufacture of automobile bodies, aircraft, and spacecraft.

ST titanium fluoride water thinned anticorrosive primer metal strip; spacecraft metal substrate water thinned anticorrosive primer; aircraft metal substrate water thinned anticorrosive primer; automobile body metal substrate water thinned anticorrosive primer; chromium free inorg compd water thinned anticorrosive primer metal; boron fluoride water thinned anticorrosive primer metal strip; aluminum fluoride water thinned anticorrosive primer metal strip; silicon fluoride water thinned anticorrosive primer metal strip; hafnium fluoride water thinned anticorrosive primer metal strip; zirconium fluoride water thinned anticorrosive primer metal strip

IT Layered double hydroxides
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(aluminum-containing, anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating** **metallic** surfaces with a paint-type **coating** prior to forming)

IT **Silanes**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(amino, anticorrosive **primer** component; pretreating with anticorrosive primers and subsequently **coating** **metallic** surfaces with a paint-type **coating** prior to forming)

IT Alcohols, uses
Amines, uses
Carbonates, uses
Fluorides, uses
Oxides (inorganic), uses
Paraffin waxes, uses
Phosphates, uses
Rare earth oxides
Silicates, uses
Sulfates, uses
Transition metal compounds
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Aminoplasts
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Polyamines
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Polysiloxanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Polyurethanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Primers (paints)
(anticorrosive; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Automobiles
(bodies; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Coating process
(coil; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Polysiloxanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polyester-, anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polysiloxane-, anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Conducting polymers
(powder, anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Aircraft
Space vehicles
(pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Amines, uses
Epoxides
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(silyl, anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Galvanized steel

RL: MSC (Miscellaneous)
(substrate; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Adhesives
Inks
(top layers; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Primers (paints)
(water-thinned; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT Aluminum alloy, base
Copper alloy, base
Iron alloy, base
Magnesium alloy, base
Nickel alloy, base
Tin alloy, base
Titanium alloy, base
Zinc alloy, base
RL: MSC (Miscellaneous)
(substrate; pretreating with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT 674-70-4 674-71-5 763-26-8 1429-50-1, Ethylenediaminetetramethylenephosphonic **acid** 3071-50-9 4546-06-9, p-Xylylenediphosphonic **acid** 4671-77-6, 1,4-Butanediphosphonic **acid** 4721-22-6, 1,6-Hexanediphosphonic **acid** 5943-21-5, 1,10-Decanediphosphonic **acid** 5943-66-8, 1,8-Octanediphosphonic **acid** 6419-19-8, Aminotrimethylenephosphonic **acid** 7450-59-1, 1,12-Dodecanediphosphonic **acid** 15827-60-8, Diethylenetriaminepentamethylenephosphonic **acid** 23605-74-5 26914-14-7, Diethylthiourea 37971-36-1 50421-68-6 74748-16-6 85590-01-8 151861-26-6, 1,14-Tetradecanediphosphonic **acid** 159239-33-5, 12-Mercaptododecylphosphonic **acid** 198065-35-9, 12-(Ethylamino)dodecanephosphonic **acid** 210237-15-3 216106-45-5 378232-64-5 412916-50-8 412916-52-0 412916-54-2
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(addnl. corrosion inhibitor; **pretreating** with anticorrosive primers and subsequently **coating metallic** surfaces with a paint-type **coating** prior to forming)

IT 50-21-5D, Lactic **acid**, titanium complexes 77-92-9, Citric **acid**, uses 598-62-9, Manganese carbonate 1306-38-3, Cerium dioxide, uses 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconia, uses 1314-36-9, Yttrium oxide, uses 1343-98-2, Silicic **acid** 1344-28-1, Aluminum oxide, uses 2530-83-8, 3-**Glycidyloxypropyltrimethoxysilane** 4619-20-9D, zirconium complexes 7429-90-5D, Aluminum, fluoro complexes 7439-89-6D, Iron, compds. 7439-91-0D, Lanthanum, salts 7439-96-5D, Manganese, salts 7439-98-7D, Molybdenum, compds. 7440-02-0D, Nickel, compds. 7440-21-3D, Silicon, fluoro complexes 7440-32-6D, Titanium, fluoro complexes 7440-33-7D, Tungsten, compds. 7440-42-8D, Boron, fluoro complexes 7440-47-3D, Chromium, compds. 7440-48-4D, Cobalt, compds. 7440-58-6D, Hafnium, fluoro complexes 7440-67-7D, Zirconium, fluoro complexes 7440-70-2D, Calcium, salts 7585-20-8, Zirconium acetate 7631-86-9, Silica, uses 7727-43-7, Barium sulfate 12021-95-3 13463-67-7, Titania, uses 13822-56-5, 3-**Aminopropyltrimethoxysilane** 15879-01-3, Triethanolamine titanate 17439-11-1 21645-51-2, Aluminum hydroxide, uses 22829-17-0, Ammonium zirconium carbonate 38497-57-3, Titanium acetate 73215-17-5 133962-46-6
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(anticorrosive **primer** component; **pretreating** with anticorrosive primers and subsequently **coating** **metallic** surfaces with a paint-type **coating** prior to forming)

IT 79-10-7D, Acrylic **acid**, esters, polymers 9002-89-5, Polyvinyl alcohol 9002-98-6, Polyethylenimine 9003-39-8, Polyvinylpyrrolidone 9003-53-6, Polystyrene 9011-05-6, Urea resin 25608-40-6, Polyaspartic **acid** 26063-13-8, Polyaspartic **acid** 59269-51-1, Polyvinylphenol
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer component; **pretreating** with anticorrosive primers and subsequently **coating** **metallic** surfaces with a paint-type **coating** prior to forming)

IT 9003-01-4, Polyacrylic **acid** 9010-77-9, Acrylic **acid** -ethylene copolymer 11101-13-6 12781-95-2 27936-88-5, Acrylic acid-vinylphosphonic **acid** copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer component; **pretreating** with anticorrosive primers and subsequently **coating** **metallic** surfaces with a paint-type **coating** prior to forming)

IT 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(substrate; pretreating with anticorrosive primers and subsequently **coating** **metallic** surfaces with a paint-type **coating** prior to forming)

IT 9002-86-2, PVC
RL: TEM (Technical or engineered material use); USES (Uses)
(top layers; pretreating with anticorrosive primers and subsequently **coating** **metallic** surfaces with a paint-type **coating** prior to forming)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(wax, anticorrosive primer component; pretreating with anticorrosive primers and subsequently **coating** **metallic** surfaces with a paint-type **coating** prior to forming)

RN 674-70-4
RN 674-71-5
RN 763-26-8
RN 1429-50-1
RN 3071-50-9
RN 4546-06-9
RN 4671-77-6
RN 4721-22-6
RN 5943-21-5
RN 5943-66-8
RN 6419-19-8
RN 7450-59-1
RN 15827-60-8
RN 23605-74-5
RN 26914-14-7
RN 37971-36-1
RN 50421-68-6
RN 74748-16-6
RN 85590-01-8
RN 151861-26-6
RN 159239-33-5
RN 198065-35-9
RN 210237-15-3
RN 216106-45-5
RN 378232-64-5

RN 412916-50-8
RN 412916-52-0
RN 412916-54-2
RN 50-21-5D
RN 77-92-9
RN 598-62-9
RN 1306-38-3
RN 1314-13-2
RN 1314-23-4
RN 1314-36-9
RN 1343-98-2
RN 1344-28-1
RN 2530-83-8
RN 4619-20-9D
RN 7429-90-5D
RN 7439-89-6D
RN 7439-91-0D
RN 7439-96-5D
RN 7439-98-7D
RN 7440-02-0D
RN 7440-21-3D
RN 7440-32-6D
RN 7440-33-7D
RN 7440-42-8D
RN 7440-47-3D
RN 7440-48-4D
RN 7440-58-6D
RN 7440-67-7D
RN 7440-70-2D
RN 7585-20-8
RN 7631-86-9
RN 7727-43-7
RN 12021-95-3
RN 13463-67-7
RN 13822-56-5
RN 15879-01-3
RN 17439-11-1
RN 21645-51-2
RN 22829-17-0
RN 38497-57-3
RN 73215-17-5
RN 133962-46-6
RN 79-10-7D
RN 9002-89-5
RN 9002-98-6
RN 9003-39-8
RN 9003-53-6
RN 9011-05-6
RN 25608-40-6
RN 26063-13-8
RN 59269-51-1
RN 9003-01-4
RN 9010-77-9
RN 11101-13-6
RN 12781-95-2
RN 27936-88-5
RN 12597-69-2
RN 9002-86-2
RN 9002-88-4
RN 9003-07-0

L26 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:552280 CAPLUS
DN 117:152280

ED Entered STN: 17 Oct 1992
TI Minimum surface treatments for adhesively bonded repairs
AU Baker, A. A.; Chester, R. J.
CS Aeronaut. Res. Lab., Australia
SO International Journal of Adhesion and Adhesives (1992), 12(2), 73-8
CODEN: IJAADK; ISSN: 0143-7496
DT Journal
LA English
CC 38-2 (Plastics Fabrication and Uses)
Section cross-reference(s): 56
AB The environmental durability of adhesive bonds between metal parts for both epoxy and acrylic adhesives was improved by the use of a **silane** solution together with a **primer**. Durability approaching that of **acid** anodization **treatments** could be obtained from **silane** plus **primer** treatments together with considerable savings in the speed of surface treatment-an important factor during aircraft repair. The compatibility of specific adhesives and primers should be exptl. determined, however, as differences in the effectiveness of primers in improving bond toughness and durability were observed
ST silane **coating metal** adhesive durability
IT Adhesives
(acrylic resin or polyester, for bonding of metals in aircraft manufacture, metal surface treatment with silane solution for improved durability of bonds of)
IT Aircraft
(manufacture of, metal surface treatment with silane solution for improved durability of adhesive bonds for)
IT Epoxy resins, uses
RL: USES (Uses)
(**primers**, for **silane** treated metal surfaces, in aircraft manufacture, for improved adhesive bond durability)
IT Phenolic resins, uses
RL: USES (Uses)
(epoxy, novolak, **primers**, for **silane** treated metal surfaces, in aircraft manufacture, for improved adhesive bond durability)
IT Epoxy resins, uses
RL: USES (Uses)
(phenolic, novolak, **primers**, for **silane** treated metal surfaces, in aircraft manufacture, for improved adhesive bond durability)
IT Coating materials
(**primers**, epoxy or phenolic resins, for **silane** treated metal surfaces, in aircraft manufacture, for improved adhesive bond durability)
IT 60181-90-0, FM73 83382-16-5, Flexon 241 85256-97-9, Versilok 201
RL: USES (Uses)
(adhesive, for bonding of metals in aircraft manufacture, metal surface treatment with silane solution for improved durability of bonds of)
IT 12604-78-3, D6Ac 12616-84-1 12627-49-5
RL: USES (Uses)
(bonding of, in aircraft manufacture, surface treatment with silane solution for improved durability in)
IT 2530-83-8, A 187
RL: USES (Uses)
(metal surface treatment with, in aircraft manufacture, for improved adhesive bond durability)
RN 60181-90-0
RN 83382-16-5
RN 85256-97-9
RN 12604-78-3
RN 12616-84-1
RN 12627-49-5
RN 2530-83-8

L26 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:98982 CAPLUS
DN 122:33594
ED Entered STN: 08 Nov 1994
TI Manufacture of anticorrosive metal-synthetic resin laminates using titanate primer
IN Goto, Yasushi; Enomoto, Seiichi; Ikeda, Hisao
PA Sekisui Chemical Co. Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B32B015-08
ICS B32B015-08; B05D007-14; C09D005-00; C09D185-00
CC 42-2 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55, 56
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06115001	A2	19940426	JP 1992-261610	19920930
PRAI JP 1992-261610		19920930		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 06115001	ICM	B32B015-08
	ICS	B32B015-08; B05D007-14; C09D005-00; C09D185-00

AB The title process comprises **coating** organic titanates on **metal** surface, contacting the **coat** with steam, heating and baking at 300-450° to form a titanate primer layer, and forming a synthetic resin layer on the primer by melt fusion. Brush coating a 60% Me2CHOH solution containing diisopropoxybis(acetylacetonato)titanium on an **acid-treated** degreased steel panel, **treating** the coating with 80%-humidity steam for 10 min, and heating for 5 min at 400° gave a 10-μm primer layer. Extrusion-coating of a modified **silane**-crosslinked polyethylene over the **primer** gave a 2-mm laminate with peel strength 20 kg/10 mm.

ST metal synthetic resin laminate primer; titanate primer **metal** polymer **coating**; steel crosslinked polyethylene laminate

IT **Coating** process
(manufacture of anticorrosive **metal**-synthetic resin laminates using titanate primer)

IT Titanates
RL: TEM (Technical or engineered material use); USES (Uses)
(manufacture of anticorrosive metal-synthetic resin laminates using titanate primer)

IT **Coating** materials
(primers, manufacture of anticorrosive **metal**-synthetic resin laminates using titanate primer)

IT 12597-69-2, Steel, uses 35312-82-4, Ethylene-vinyltrimethoxysilane copolymer
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(manufacture of anticorrosive metal-synthetic resin laminates using titanate primer)

IT 17927-72-9, Diisopropoxybis(acetylacetonato)titanium 82089-64-3
RL: TEM (Technical or engineered material use); USES (Uses)
(manufacture of anticorrosive metal-synthetic resin laminates using titanate primer)

RN 12597-69-2
RN 35312-82-4
RN 17927-72-9
RN 82089-64-3

L26 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:558775 CAPLUS
DN 127:163245
ED Entered STN: 04 Sep 1997
TI Soil-resistant metal gaskets
IN Kurosawa, Takatoshi; Miyake, Shinichi; Sakagami, Toshiki; Yamada, Kinji
PA Japan Synthetic Rubber Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09K003-10
ICS E04B001-684; F16J015-00
CC 42-11 (Coatings, Inks, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09176619	A2	19970708	JP 1995-351282	19951227
PRAI JP 1995-351282		19951227		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 09176619	ICM	C09K003-10
	ICS	E04B001-684; F16J015-00

OS MARPAT 127:163245
AB Title gaskets contain surface coatings containing hydrolyzates of R1nSi(OR2)4-n (R1 = C1-8 organic groups; R2 = C1-5 alkyl, C1-4 acyl; n = 0-2). A **chem. treated** and primed Al panel was coated with a composition containing a Sn catalyst, a tackifier, and MeSi(OMe)3-Me2Si(OMe)2 copolymer and baked to form a panel showing good soil, warm water, and weather resistance.
ST siloxane **coating metal** gasket soil resistance; weather resistance siloxane **coating metal** gasket; water resistance siloxane **coating metal** gasket
IT Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic, primer, Kaneka Gemlac; **chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
IT Polysiloxanes, uses
Polysiloxanes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(aluminoxane-; **chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
IT Coating materials
(antisoiling; **chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
IT Gaskets
(**chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
IT Polysiloxanes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
IT Silsesquioxanes
RL: TEM (Technical or engineered material use); USES (Uses)
(primer; **chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
IT Aluminoxanes
Aluminoxanes
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(siloxane-; **chem.-treated** and primed metal gaskets

topcoated with antisoiling siloxanes)
IT 1344-28-1, Almite, uses 7738-94-5, Chromic **acid** (H2CrO4)
RL: TEM (Technical or engineered material use); USES (Uses)
(**chem. treatment** of aluminum with; **chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
IT 149000-95-3P, Dimethyldimethoxysilane-methyltrimethoxysilane copolymer 193539-43-4P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
IT 7429-90-5, Aluminum, miscellaneous
RL: MSC (Miscellaneous)
(gasket; **chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
IT 25498-03-7, **Methyltrimethoxysilane** homopolymer 153315-80-1, **MethylTrimethoxysilane** homopolymer, sru
RL: TEM (Technical or engineered material use); USES (Uses)
(**primer**; **chem.-treated** and primed metal gaskets topcoated with antisoiling siloxanes)
RN 1344-28-1
RN 7738-94-5
RN 149000-95-3P
RN 193539-43-4P
RN 7429-90-5
RN 25498-03-7
RN 153315-80-1

L26 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:98981 CAPLUS
DN 122:33593
ED Entered STN: 08 Nov 1994
TI Manufacture of durable metal-synthetic resin laminates with good adhesion and corrosion resistance
IN Goto, Yasushi; Enomoto, Seiichi; Ikeda, Hisao
PA Sekisui Chemical Co. Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B32B015-08
ICS B32B015-08; B05D007-14; C09D005-00; C09D185-00
CC 42-2 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55, 56
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06115002	A2	19940426	JP 1992-261611	19920930
PRAI	JP 1992-261611		19920930		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 06115002	ICM	B32B015-08
	ICS	B32B015-08; B05D007-14; C09D005-00; C09D185-00

AB The title process comprises **coating** on a **metal** substrate a primer composition containing organic titanate rapidly hydrolyzable in atmospheric and organic titanate slowly hydrolyzable with H2O addition, baking the coating at 300-450° to form a primer layer, and forming a synthetic resin layer over the primer by melt fusion. Brush-coating a solution containing 100 parts di-isopropoxybis(acetylacetonato)titanium (as 60% Me2CHOH solution)

and 10 parts (BuO)4Ti on an **acid-treated** degreased steel panel, heating 5 min at 400°, and melt-extruding a **vinylsilane**-crosslinked polyethylene over the **primer** gave a laminate with peeling strength 20 kg/10 mm.

ST metal synthetic resin laminate adhesion; steel polyethylene laminate primer adhesion; titanate primer metal resin laminate

IT **Coating** process
(manufacture of durable **metal**-synthetic resin laminates with good adhesion and corrosion resistance)

IT Titanates
RL: TEM (Technical or engineered material use); USES (Uses)
(primers; manufacture of durable metal-synthetic resin laminates with good adhesion and corrosion resistance)

IT Metals, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(substrates; manufacture of durable metal-synthetic resin laminates with good adhesion and corrosion resistance)

IT **Coating** materials
(primers, titanates; durable **metal**-synthetic resin laminates with good adhesion and corrosion resistance)

IT 35312-82-4, Ethylene-vinyltrimethoxysilane copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(**coating**; manufacture of durable **metal**-synthetic resin laminates with good adhesion and corrosion resistance)

IT 12597-69-2, Steel, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(manufacture of durable metal-synthetic resin laminates with good adhesion and corrosion resistance)

IT 5593-70-4 17927-72-9
RL: TEM (Technical or engineered material use); USES (Uses)
(primer; manufacture of durable metal-synthetic resin laminates with good adhesion and corrosion resistance)

RN 35312-82-4
RN 12597-69-2
RN 5593-70-4
RN 17927-72-9

L26 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1988:632873 CAPLUS
DN 109:232873
ED Entered STN: 24 Dec 1988
TI Urethane-modified epoxy resin-coated steel sheets
IN Ogishi, Hideo; Kobayashi, Shigeru; Ichida, Toshiro
PA Kawasaki Steel Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B05D007-14
ICS B05D007-24
CC 42-9 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 63097266	A2	19880427	JP 1986-241106	19861009
PRAI JP 1986-241106		19861009		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 63097266	ICM	B05D007-14
	ICS	B05D007-24

AB Title sheets with good formability and corrosion resistance at bends are manufactured by applying amino- or mercaptosilane coupling agents to

chem. **pretreated** steel, then applying a primer containing 100 parts urethane-modified epoxy resins and 5-50 parts melamine resins, urea resins, blocked polyisocyanates, and/or phenolic resins. The urethane-modified epoxy resins are obtained by treating hydroxy-containing epoxides with diisocyanates to form isocyanate-terminated urethane compds., then treating the products with hydroxy-containing high-mol.-weight epoxy resins at NCO/OH equiv ratio 0.1-0.5. Thus, Epolite 80MF (glycerin diglycidyl ether epoxy resin) was heated with excess Coronate T (TDI) containing DBTDL, then mixed with Epikote 1010 at NCO/OH equivalent ratio 0.4 and heated to give a polymer (I) containing no free NCO groups. I 100, Cymel 303 (melamine resin) 30, TiO_2 65, $SrCrO_4$ 65, and thinner 260 g were ball milled to form a primer. Phosphated sheet steel was dipped in 5% aqueous SH 6020 [γ-(2-aminoethyl)aminopropyltrimethoxysilane], dried, coated with a 5-μm layer of the primer, baked, coated with a 20-μm polyester topcoat, and baked to give precoated sheet **metal** which when bent showed no **coating** cracking and good salt spray resistance. Specimens prepared similarly without the SH 6020 pretreatment showed loss of coating adhesion in salt spray, and others using an Epikote 1010-Cymel 303 primer showed cracks in the coating when bent.

ST polyester epoxy resin coil coating; polyurethane epoxy rustproofing coil coating; precoated sheet metal epoxy polyester; urethane modified epoxy precoated steel; **silane** coupler epoxy **primer** steel; silane coupler steel coil coating; flexibility adhesion coil coating steel

IT Coupling agents
(aminosilanes or mercaptosilanes, steel treated with, urethane-modified epoxy resin coil coatings for)

IT Coating materials
(anticorrosive, coil, urethane-modified epoxy resins, for silane coupler-pretreated steel)

IT 12597-69-2
RL: MSC (Miscellaneous)
(coating materials, anticorrosive, coil, urethane-modified epoxy resins, for silane coupler-pretreated steel)

IT 117647-19-5 117647-73-1 117647-74-2 117647-75-3 117707-78-5
RL: USES (Uses)
(coil coatings, for silane-pretreated steel, with good flexibility and corrosion resistance)

IT 1760-24-3 7803-62-5D, Silane, amino and mercapto derivs.
RL: USES (Uses)
(coupling agents, steel pretreated with, urethane-modified epoxy resin coil coatings for)

IT 556-52-5, Glycidol
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with TDI)

IT 26471-62-5, TDI
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with glycidol)

RN 12597-69-2
RN 117647-19-5
RN 117647-73-1
RN 117647-74-2
RN 117647-75-3
RN 117707-78-5
RN 1760-24-3
RN 7803-62-5D
RN 556-52-5
RN 26471-62-5

L26 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:665711 CAPLUS
DN 133:241364
ED Entered STN: 22 Sep 2000
TI Polymer coating and surface treatment of copper foils to prevent fatigue

damage and microcracks in flexible electric-circuit laminates

IN Merchant, Harish D.; Poutasse, Charles A.; Lee, Chin-Ho

PA Ga-Tek Inc., USA

SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW

DT Patent

LA English

IC ICM H05K001-00
ICS H05K003-38

CC 56-6 (Nonferrous Metals and Alloys)
Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1037511	A2	20000920	EP 2000-302147	20000316
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6221176	B1	20010424	US 1999-271640	19990317
	CA 2287707	C	20030708	CA 1999-2287707	19991026
	CN 1267596	A	20000927	CN 2000-100933	20000107
	JP 2000263693	A2	20000926	JP 2000-20918	20000128
	JP 3489814	B2	20040126		
PRAI	US 1999-271640	A	19990317		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1037511	ICM	H05K001-00
	ICS	H05K003-38

AB A flexible laminate resistant to bending fatigue contains: (a) top film of flexible polymer; (b) Cu foil or interlayer typically ≤70 μm thick; and (c) bottom film of flexible polymer. The Cu foil or interlayer is pretreated by coating for microcrack prevention in bending or flexing, especially to form a surface oxide film and/or **metal coating** in the presence of organosilane coupling layer. The typical flexible laminate is based on the Cu layer 18 μm thick with the bottom polyimide coating 50 μm thick, and the top surface with an adhesive interlayer 25 μm thick and polyimide layer 25 μm thick. The Cu-layer surface is pretreated with electroless Cu film .apprx.1 μm thick, or with Cu-oxide film interlayer ≤2 μm thick, to increase fatigue resistance in cyclic bending. The Cu-based laminates are suitable for elec. circuit boards having light weight and resistant to cyclic flexing damage.

ST copper foil polymer coating flexible elec circuit; oxide film copper foil flexible elec circuit

IT Silanes
RL: TEM (Technical or engineered material use); USES (Uses)
(adhesion promoters, copper laminates with; polymer coating and surface treatment on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT **Oxidizing** agents
(copper **treatment** with; oxidation **treatment** and polymer coating on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT Printed circuit boards
(copper-clad, flexible; polymer coating and surface treatment on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT Lamination
(copper-core, for elec. circuits; polymer coating and surface treatment on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT Polyesters, uses
Polyimides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(film, copper laminates with; polymer coating and surface treatment on copper foils to prevent fatigue damage in flexible elec.-circuit

laminates)

IT Polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(films, copper laminated with; polymer coating and surface treatment on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT Fatigue, mechanical
(flexural; oxidation treatment and polymer coating on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT Plasma
(**oxidizing**, copper **treatment** with; oxidation **treatment** and polymer coating on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT 7440-50-8, Copper, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(foils, for elec. circuits; polymer coating and surface treatment on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT 7429-90-5, Aluminum, uses 7439-89-6, Iron, uses 7439-96-5, Manganese, uses 7440-05-3, Palladium, uses 7440-21-3, Silicon, uses 7440-25-7, Tantalum, uses 7440-31-5, Tin, uses 7440-32-6, Titanium, uses 7440-33-7, Tungsten, uses 7440-48-4, Cobalt, uses 7440-62-2, Vanadium, uses 7440-74-6, Indium, uses
RL: MOA (Modifier or additive use); USES (Uses)
(interlayer with, on copper foils; **metal** interlayer and polymer **coating** on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT 7440-02-0, Nickel, uses 7440-47-3, Chromium, uses 7440-66-6, Zinc, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(interlayer, copper foils with; **metal** interlayer and polymer **coating** on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT 1317-38-0, Copper oxide, uses 1317-39-1, Copper oxide, uses 1344-70-3, Copper oxide
RL: TEM (Technical or engineered material use); USES (Uses)
(interlayer, copper foils with; polymer coating and oxidation treatment on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

IT 919-30-2, 3-Aminopropyl **triethoxysilane** 1760-24-3, N-(2-Aminoethyl-3-aminopropyl **trimethoxysilane**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(**primer**, copper treatment with; **metal** interlayer and polymer **coating** on copper foils to prevent fatigue damage in flexible elec.-circuit laminates)

RN 7440-50-8
RN 7429-90-5
RN 7439-89-6
RN 7439-96-5
RN 7440-05-3
RN 7440-21-3
RN 7440-25-7
RN 7440-31-5
RN 7440-32-6
RN 7440-33-7
RN 7440-48-4
RN 7440-62-2
RN 7440-74-6
RN 7440-02-0
RN 7440-47-3
RN 7440-66-6
RN 1317-38-0
RN 1317-39-1
RN 1344-70-3

RN 919-30-2
RN 1760-24-3

L26 ANSWER 9 OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2004-329377 [30] WPIX
CR 2004-269859 [25]
DNN N2004-262876 DNC C2004-124644
TI Matrix band or separating strip used in dentistry, includes coating applied to its surface to minimize ingress of fluid between tooth and the matrix band.
DC A96 E11 L02 P32
IN HARADEN, R E; HARADEN, W J
PA (HARA-I) HARADEN R E; (HARA-I) HARADEN W J
CYC 46
PI WO 2004024018 A1 20040325 (200430)* EN 30 A61C005-04
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: CA IL IN NZ US
ADT WO 2004024018 A1 WO 2003-US27871 20030905
PRAI US 2002-238295 20020910
IC ICM A61C005-04
AB WO2004024018 A UPAB: 20040511
NOVELTY - A matrix band or separating strip comprises a coating applied to its surface.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for making a coated matrix band comprising etching a matrix band to receive a capillary action reducing coating; applying the coating to the matrix band to provide the matrix band with a reduced capillary action between the matrix band and a tooth; adhering the capillary action reducing coating to the matrix band to form the coated matrix band; and recovering the coated matrix band with the reduced capillary action.

USE - The invention is used in dentistry.

ADVANTAGE - The invention minimizes the ingress of fluid between a tooth and the matrix band.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the coated matrix band.

Wings 116, 118
Polymer 120
Cross section 122
Aperture 124
wing angle 126
Dwg.1/21

FS CPI GMPI
FA AB; GI; DCN
MC CPI: A11-B05; A11-C04B2; A12-V03C1; E05-E01; E10-B01C2; E10-E04L1; E10-H04C4; E31-F05; E35-P; L02-J01

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Search

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     FILE 'USPATFULL, USPAT2' ENTERED AT 18:38:10 ON 23 AUG 2004
L1        11069 SEA ABB=ON  PLU=ON  427/059000-126600/NCL
L2          465 SEA ABB=ON  PLU=ON  427/059000-126600/NCL
     TOTAL FOR ALL FILES
L3        11534 SEA ABB=ON  PLU=ON  427/059000-126600/NCL
L4          636 SEA ABB=ON  PLU=ON  L1 AND (?ROUGHEN?)
L5           30 SEA ABB=ON  PLU=ON  L2 AND (?ROUGHEN?)
     TOTAL FOR ALL FILES
L6          666 SEA ABB=ON  PLU=ON  L3 AND (?ROUGHEN?)
L7          135 SEA ABB=ON  PLU=ON  L1 AND (?ROUGHEN? (5A) (CHEMICAL? OR ACID?
                OR OXIDIZ?))
L8            5 SEA ABB=ON  PLU=ON  L2 AND (?ROUGHEN? (5A) (CHEMICAL? OR ACID?
                OR OXIDIZ?))
     TOTAL FOR ALL FILES
L9          140 SEA ABB=ON  PLU=ON  L3 AND (?ROUGHEN? (5A) (CHEMICAL? OR ACID?
                OR OXIDIZ?))
L10          17 SEA ABB=ON  PLU=ON  L7 AND ?SILANE?
L11           1 SEA ABB=ON  PLU=ON  L8 AND ?SILANE?
     TOTAL FOR ALL FILES
L12          18 SEA ABB=ON  PLU=ON  L9 AND ?SILANE?
L13          18 FOCUS L12 1-
                D 1-18 BIB AB

=>
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electrical product

L13 ANSWER 1 OF 18 USPATFULL on STN
AN 2001:147525 USPATFULL
TI Method of producing copper surfaces for improved bonding, compositions used therein and articles made therefrom
IN Bishop, Craig V., Lakewood, OH, United States
Bokisa, George S., North Olmsted, OH, United States
Durante, Robert J., Parma Hts., OH, United States
Kochilla, John R., Cleveland, OH, United States
PA Atotech Deutschland GmbH, Berlin, Germany, Federal Republic of (non-U.S. corporation)
PI US 6284309 B1 20010904
AI US 1997-994184 19971219 (8)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Mills, Gregory; Assistant Examiner: Goudreau, George
LREP Renner, Otto, Boisselle & Sklar, LLP
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1424
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to a method of forming a substrate with preparing a surface capable of making a cocontinuous bond comprising the steps of 1) obtaining a copper or copper alloy substrate and 2) applying an etching composition which comprises (a) an acid, (b) an oxidizing agent, (c) a copper complexing agent, and (d) a copper complex, wherein the copper complex is present in an amount which precipitates when applied to the copper or copper alloy substrate. The method also includes the step of 3) treating the substrate with a coating composition and/or 4) applying a stripping composition to the substrate. The invention also relates to copper articles, having surface porosity, including multilayer articles such as printed circuit boards and compositions used in the method. The present invention provides microporous copper or copper alloy substrates which have improved adhesion properties to organic material.

L13 ANSWER 2 OF 18 USPATFULL on STN
AN 96:113664 USPATFULL
TI Adhesive layer in multi-level packaging and organic material as a metal diffusion barrier
IN Adamopoulos, Eleftherios, Bronx, NY, United States
Kim, Jungihl, Seoul, Korea, Republic of
Lee, Kang-Wook, Yorktown Heights, NY, United States
Oh, Tae S., Seoul, Korea, Republic of
O'Toole, Terrence R., Hopewell Junction, NY, United States
Purushothaman, Sampath, Yorktown Heights, NY, United States
Ritsko, John J., Mount Kisco, NY, United States
Shaw, Jane M., Ridgefield, CT, United States
Viehbeck, Alfred, Stormville, NY, United States
Walker, George F., New York, NY, United States
PA International Business Machines Corporation, Armonk, NY, United States (U.S. corporation)
PI US 5582858 19961210
AI US 1995-474985 19950607 (8)
RLI Division of Ser. No. US 1994-197941, filed on 17 Feb 1994 76 Ser. No. US 1991-771929, filed on 7 Oct 1991, now patented, Pat. No. US 5326643
DT Utility
FS Granted
EXNAM Primary Examiner: Beck, Shrive; Assistant Examiner: Cameron, Erma
LREP Scully, Scott, Murphy & Presser
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 1042
AB The disclosure describes a multilayer article of manufacture comprising a substrate having adhered to it a terminally unsaturated adhesive polyimide, where the surface of the adhesive opposite the substrate is adhered to a polyimide, the article further characterized in having one set or a plurality of alternating layers of the terminally unsaturated adhesive polyimide and the polyimide. In another embodiment, the article has at least one adhesive polyimide layer adhered to a metal substrate or an electrical circuit component such as an integrated circuit, or means for forming electrical connections in an electrical circuit such as metal conduits on the circuit or a wiring network embedded within a ceramic and/or polymer substrate.

In manufacturing the article of manufacture, a surface treatment technique such as wet process or a plasma/optional **silane** coupling agent may be applied to either the substrate, adhesive polyimide film or polyimide film prior to the bonding operation.

A novel adhesive polyimide is also described which is an adhesive polyimide such as ODPA-APB terminated with unsaturated heterocyclic monoamines such as azaadenines, aminobenzotriazoles, aminopurines or aminopyrazolopyrimidines and optionally anhydrides, aminoacetylenes, vinylamines or amino phosphines. The novel polyimide may also contain unsaturated heterocyclic groups in the polymer backbone or chain, either as a partial or complete replacement for the aromatic diamines used in synthesizing the polyimide. This novel adhesive polyimide in this invention acts as an adhesive layer for the polymer-substrate (copper, polymer, glass ceramic) interface as well as a copper diffusion barrier layer for the polymer-copper interface.

L13 ANSWER 3 OF 18 USPATFULL on STN
AN 95:9583 USPATFULL
TI **Organosilane** adhesion promotion in manufacture of additive printed wiring board
IN Minten, Karl L., Greenville, SC, United States
PA AMP-AKZO Corporation, Newark, DE, United States (U.S. corporation)
PI US 5385787 19950131
AI US 1993-12698 19930203 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Beck, Shrive; Assistant Examiner: Dang, Vi Duong
LREP Fennelly, Richard P., Morris, Louis A.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 281
AB The metal (for example, copper) to base material adhesion in an additive printed wiring board is improved by contacting the base material with a solution containing a **ureidosilane**, preferably also comprising a disilyl crosslinking agent, followed by drying the solution to remove solvent, before contacting the base material with an activating agent for an electroless deposition step. Heating of the board, after the deposition of the metal, for example by baking in an oven or in an autoclave, gives the highest level of adhesion between metal and base material.

L13 ANSWER 4 OF 18 USPATFULL on STN
AN 2001:125617 USPATFULL
TI Formation of this film capacitors
IN Hunt, Andrew T., Atlanta, GA, United States
Flanagan, John S., Atlanta, GA, United States
Neuman, George A., Suwanee, GA, United States
PA MicroCoating Technologies, Inc., Chamblee, GA, United States (U.S. corporation)

PI US 6270835 B1 20010807
AI US 1999-414137 19991007 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Talbot, Brian K.
LREP Nacker, Wayne E., Frickey, Darryl P.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 2472
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Thin layer capacitors are formed from a first flexible metal layer, a dielectric layer between about 0.03 and about 2 microns deposited thereon, and a second flexible metal layer deposited on the dielectric layer. The first flexible metal layer may either be a metal foil, such as a copper, aluminum, or nickel foil, or a metal layer deposited on a polymeric support sheet. Depositions of the layers is by or is facilitate by combustion chemical vapor deposition or controlled atmosphere chemical vapor deposition.

L13 ANSWER 5 OF 18 USPATFULL on STN
AN 1999:7065 USPATFULL
TI Method for making multi-layer circuit boards
IN Adlam, Edwin J., Singapore, Singapore
Rusli, Sukianto, Chandler, AZ, United States
Wahl, Jordan L., Mesa, AZ, United States
Ilercil, Tayfun, Phoenix, AZ, United States
Forcier, Robert A., Mesa, AZ, United States
Sallo, Jerome S., Scottsdale, AZ, United States
PA Park Electrochemical Corporation, Lake Success, NY, United States (U.S. corporation)
PI US 5861076 19990119
AI US 1995-524182 19950906 (8)
RLI Continuation of Ser. No. US 1994-213172, filed on 14 Mar 1994, now abandoned which is a continuation-in-part of Ser. No. US 1993-4621, filed on 14 Jan 1993, now abandoned which is a continuation of Ser. No. US 1991-732215, filed on 19 Jul 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Gallagher, John J.
LREP Darby & Darby
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 1260
AB The present invention relates to a bond enhancement process for promoting strong, stable adhesive bonds between surfaces of copper foil and adjacent resin impregnated substrates or superimposed metallic sublayers. According to the process of the invention, a black oxide-coated copper surface is treated with an aqueous reducing solution containing sodium metabisulfite and sodium sulfide to convert the black oxide coating to a roughened metallic copper coating. The roughened metallic copper-coated surface is then passivated and laminated to a resin impregnated substrate. The bond enhancement process is especially useful in multilayer printed circuit fabrication and in the treatment of copper circuit lines and areas which are disconnected from each other, that is, which do not have electrically conductive continuity. Inner-layer laminates prepared according to the process of the invention are not susceptible to pink-ring formation, exhibit excellent resistance to chemical attack at drilled holes and sheared edges and are stable under thermal and mechanical stresses.

L13 ANSWER 6 OF 18 USPATFULL on STN
AN 2003:168852 USPATFULL

TI Metal pattern forming method
IN Fukushima, Motoo, Gunma-ken, JAPAN
Tabei, Eiichi, Gunma-ken, JAPAN
Furihata, Tomoyoshi, Gunma-ken, JAPAN
Arakawa, Masaya, Gunma-ken, JAPAN
PA Shin-Etsu Chemical Co., Ltd., Tokyo, JAPAN (non-U.S. corporation)
PI US 6582767 B1 20030624
AI US 2000-702852 20001101 (9)
PRAI JP 1999-311215 19991101
DT Utility
FS GRANTED
EXNAM Primary Examiner: Barr, Michael
LREP Birch, Stewart, Kolasch & Birch, LLP
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 707
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method for forming a metal pattern by the micro-stamping process involves the steps of treating a substrate bearing a thin film of a reducing silicon polymer with a solution containing a salt of a metal having a standard oxidation-reduction potential of at least 0.54 volt, allowing metal colloid to deposit on the substrate surface, stamping a pattern of an alkane thiol to the substrate surface for transferring the pattern to the metal colloid-bearing silicon polymer thin film, and effecting electroless metal plating for forming a metal pattern only on the region of the silicon polymer thin film which is not covered with the alkane thiol pattern. The finely defined metal pattern can be formed on any type of substrate though inexpensive simple steps and has good adhesion to the substrate.

L13 ANSWER 7 OF 18 USPATFULL on STN
AN 2002:136678 USPATFULL
TI Epoxy resin composition, and adhesive film and prepreg using the composition, and multilayer printed-wiring board using them, and process for manufacturing the same
IN Nakamura, Shigeo, Kawasaki, JAPAN
Yokota, Tadahiko, Kawasaki, JAPAN
PA Ajinomoto Co., Inc., Tokyo, JAPAN (non-U.S. corporation)
PI US 6403221 B1 20020611
AI US 2000-684671 20001011 (9)
PRAI JP 1999-291503 19991013
JP 2000-302070 20001002
DT Utility
FS GRANTED
EXNAM Primary Examiner: Dawson, Robert; Assistant Examiner: Feely, Michael J
LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
CLMN Number of Claims: 56
ECL Exemplary Claim: 1,41
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1021
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Epoxy resin compositions which comprise, as essential components, (A) an epoxy resin having two or more epoxy groups in one molecule, (B) a phenolic curing agent, (C) a phenoxy resin containing a bisphenol S skeleton and having a weight average molecular weight of 5,000 to 100,000, and (D) a curing accelerator, are useful for making adhesive films formed by coating the epoxy resin composition on a supporting base film. Such compositions are also useful for making prepregs, by coating and/or impregnating a sheet-shaped reinforced base material made of a fiber with the resin composition, as well as multilayer printed-wiring boards made with such prepregs. Such epoxy resin compositions are also useful for forming conductor layers with excellent adhesiveness without requiring, in the insulating layer, a roughening component which

deteriorates performance, as well as multilayer printed-wiring boards.

L13 ANSWER 8 OF 18 USPATFULL on STN
AN 91:79834 USPATFULL
TI Adhesive composition for printed wiring boards with acrylonitrile-butadiene rubber having carboxyl groups and 20 PPM or less metal ionic impurities; an alkyl phenol resin; an epoxy resin; palladium catalyst, and coupling agent
IN Takanezawa, Shin, Shimodate, Japan
Iwasaki, Yorio, Shimodate, Japan
Takaahashi, Hiroshi, Kasama, Japan
Okamura, Toshiro, Shimodate, Japan
Amano, Saburo, Yuki, Japan
Yokoyama, Hiroyoshi, Yuki, Japan
Fukuoka, Noriyoshi, Takaoka, Japan
Amano, Tatsuya, Moda, Japan
PA Hitachi-Chemical Co., Ltd., Japan (non-U.S. corporation)
PI US 5053280 19911001
AI US 1989-408688 19890918 (7)
PRAI JP 1988-235196 19880920
DT Utility
FS Granted
EXNAM Primary Examiner: Lusignan, Michael; Assistant Examiner: Dudash, Diana
LREP Antonelli, Terry, Stout and Kraus
CLMN Number of Claims: 4
ECL Exemplary Claim: 4
DRWN No Drawings
LN.CNT 387
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An adhesive composition for producing printed wiring boards comprising (A) acrylonitrile-butadiene rubber having carboxyl groups in the molecule and containing 20 ppm or less of metal ionic impurities, (B) an alkyl phenol resin, (C) an epoxy resin, (D) a catalyst for electroless plating, and (E) a coupling agent having an ethylene or vinyl group, is useful in a so-called additive process.

L13 ANSWER 9 OF 18 USPATFULL on STN
AN 2001:49996 USPATFULL
TI Process for manufacturing a printed wiring board
IN Boyko, Christina M., Endicott, NY, United States
Day, Robert J., Dryden, NY, United States
Stauffer, Kristen A., Vestal, NY, United States
PA International Business Machines Corporation, Armonk, NY, United States (U.S. corporation)
PI US 6212769 B1 20010410
AI US 1999-343077 19990629 (9)
DT Utility
FS Granted
EXNAM Primary Examiner: Young, Lee; Assistant Examiner: Chang, Rick Kiltae
LREP Salzman & Levy, Fraley, Lawrence R.
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN 28 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 712
AB The present invention teaches a simplified process for fabricating high density printed wiring boards using a semi-additive process. A roughened copper foil is laminated to a dielectric substrate. The foil is subsequently removed from the dielectric to create a roughened, irregular surface on the dielectric substrate. Vertical angle through holes and blind holes are formed in the substrate. A uniform copper commoning layer is electrolessly plated to the roughened dielectric substrate and through holes. A photoresist is applied on the surface of the electroless plated layer and irradiated through a mask having printed circuit features. After developing the photoresist the uncovered

electroless layer is electrolytically plated to create the final features and circuitry. After stripping the remaining photoresist the unplated electroless copper layer is etched to electronically isolate the copper features and circuitry lines.

L13 ANSWER 10 OF 18 USPATFULL on STN
AN 2002:88088 USPATFULL
TI Multilayer printed wiring board and its manufacturing method, and resin composition for filling through-hole
IN Asai, Motoo, Ibi-gun, JAPAN
Shimada, Kenichi, Ibi-gun, JAPAN
Noda, Kouta, Ibi-gun, JAPAN
Kariya, Takashi, Ibi-gun, JAPAN
Segawa, Hiroshi, Ibi-gun, JAPAN
PA Ibiden Co., Ltd., Gifu, JAPAN (non-U.S. corporation)
PI US 6376049 B1 20020423
WO 9920090 19990422
AI US 1999-341689 19990723 (9)
WO 1990-JP9804584 19901012
19990723 PCT 371 date
PRAI JP 1997-280499 19971014
JP 1997-340180 19971210
JP 1997-340182 19971210
JP 1998-67065 19980317
DT Utility
FS GRANTED
EXNAM Primary Examiner: Lam, Cathy
LREP Greenblum & Bernstein, P.L.C.
CLMN Number of Claims: 86
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 2315
AB A multilayer printed wiring board is composed of a substrate provided with through-holes, and a wiring board formed on the substrate through the interposition of an interlaminar insulating resin layer, the through-holes having a roughened internal surface and being filled with a filler, an exposed part of the filler in the through-holes being covered with a through-hole-covering conductor layer, and a viahole formed just thereabove being connected to the through-hole-covering conductor layer. Without peeling between the through-holes and the filler, this wiring board has a satisfactory connection reliability between the through-holes and the internal layer circuit and provides a high density wiring.

L13 ANSWER 11 OF 18 USPATFULL on STN
AN 2004:205443 USPATFULL
TI Process for manufacturing a printed wiring board
IN Boyko, Christina M., Endicott, NY, United States
Day, Robert J., Dryden, NY, United States
Stauffer, Kristen A., Vestal, NY, United States
PA International Business Machines Corporation, Armonk, NY, United States (U.S. corporation)
PI US 6775907 B1 20040817
AI US 2000-661738 20000914 (9)
RLI Division of Ser. No. US 1999-343077, filed on 29 Jun 1999, now patented, Pat. No. US 6212769
DT Utility
FS GRANTED
EXNAM Primary Examiner: Chang, Richard
LREP Mark Levy & Associates, Fraley, Lawrence R.
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 28 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 760

AB The present invention teaches a simplified process for fabricating high density printed wiring boards using a semi-additive process. Steps required to achieve this objective include adhering an electroless plated copper commoning layer to a surface roughened dielectric substrate. Subsequently, the commoning layer is photolithographically personalized by covering the commoning layer with a resist and then uncovering predetermined areas of the aforementioned commoning layer. Consequently, the semi-additive method involves electroplating copper onto the uncovered areas of the commoning layer, thereby generating copper features and circuitry. Finally, the semi-additive process requires the stripping of the remaining photoresist, and the unplated electroless copper layer is etched in order to electronically isolate the copper features and circuitry lines.

L13 ANSWER 12 OF 18 USPATFULL on STN
AN 2003:180437 USPATFULL
TI Method and materials for transferring a material onto a plasma treated surface according to a pattern
IN Bellmann, Erika, St. Paul, MN, UNITED STATES
Raghunath, Padiyath, Woodbury, MN, UNITED STATES
Baetzold, John P., St. Paul, MN, UNITED STATES
PA 3M Innovative Properties Company (U.S. corporation)
PI US 2003124265 A1 20030703
AI US 2001-4706 A1 20011204 (10)
DT Utility
FS APPLICATION
LREP 3M INNOVATIVE PROPERTIES COMPANY, PO BOX 33427, ST. PAUL, MN, 55133-3427
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 1401
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method of transferring a transfer element of a donor sheet to a receptor includes forming an organic layer on a receptor substrate and forming a transfer element on a donor sheet, where the exposed surface of the transfer element is organic. Either the surface of the organic layer or the exposed surface of the transfer element (or both) is roughened using a plasma treatment. The transfer element of the donor sheet is then selectively thermally transferred to the surface of the organic layer.

L13 ANSWER 13 OF 18 USPATFULL on STN
AN 88:22765 USPATFULL
TI Method for making multilayer circuits using embedded catalyst receptors
IN Cohen, Abraham B., Springfield, NJ, United States
Fan, Roxy N., E. Brunswick, NJ, United States
Quinn, John A., Morganville, NJ, United States
PA E. I. Du Pont de Nemours and Company, Wilmington, DE, United States (U.S. corporation)
PI US 4737446 19880412
AI US 1986-947832 19861230 (6)
DT Utility
FS Granted
EXNAM Primary Examiner: Swisher, Nancy A. B.; Assistant Examiner: Ryan, Patrick J.
CLMN Number of Claims: 19
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1069
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention is directed to a laminate for the preparation of a multilayer printed circuit by electroless plating of conductive metal thereon which comprises

a. a substrate having formed on a surface thereof

b. a conductive pattern, and,

c. overlying the pattern and surrounding substrate areas, a layer of tonable photodielectric material having partially embedded therein finely divided particles of adsorbent which protrude from the layer surface away from the substrate, the protrusive surfaces of which are adsorptive with respect to electroless plating catalysts or reductive precursors thereof.

L13 ANSWER 14 OF 18 USPATFULL on STN
AN 2002:153998 USPATFULL
TI PROCESS OF FABRICATING A CIRCUITZED STRUCTURE
IN Jones, Gerald Walter, Apalachin, NY, UNITED STATES
Keesler, Ross William, Endicott, NY, UNITED STATES
Markovich, Voya Rista, Endewell, NY, UNITED STATES
Rudik, William John, Vestal, NY, UNITED STATES
Wilson, James Warren, Vestal, NY, UNITED STATES
Wilson, William Earl, Waverly, NY, UNITED STATES
PI US 2002078562 A1 20020627
US 6739048 B2 20040525
AI US 2000-491755 A1 20000127 (9)
RLI Division of Ser. No. US 1998-5182, filed on 8 Jan 1998, GRANTED, Pat. No. US 6131279
DT Utility
FS APPLICATION
LREP Paul J Esatto JR Esq, Scully Scott Murphy & Presser, 400 Garden City Plaza, Garden City, NY, 11530
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 652
AB A process of fabricating a circuitized substrate is provided which comprising the steps of: providing an organic substrate having circuitry thereon; applying a dielectric film on the organic substrate; forming microvias in said dielectric film; sputtering a metal seed layer on the dielectric film and in said microvias; plating a metallic layer on the metal seed layer; and forming a circuit pattern thereon.

L13 ANSWER 15 OF 18 USPATFULL on STN
AN 2002:81156 USPATFULL
TI Nanostructure coatings
IN Hunt, Andrew T., Atlanta, GA, United States
Luten, III, Henry A., Doraville, GA, United States
PA MicroCoating Technologies, Inc., Atlanta, GA, United States (U.S. corporation)
PI US 6372364 B1 20020416
AI US 1999-376625 19990818 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Jones, Deborah; Assistant Examiner: Koehler, Robert R.
LREP Muratori, Alfred H., Nacker, Wayne E.
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 695
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A thin film product having a nanostructured surface, a laminate product including the thin film and a temporary substrate opposite the nanostructured surface, a laminate product including the thin film and a final substrate attached to the nanostructured surface and a method of producing the thin film products. The thin film is particularly useful in the electronics industry for the production of integrated circuits,

printed circuit boards and EMF shielding. The nanostructured surface includes surface features that are mostly smaller than one micron, while the dense portion of the thin film is between 10-1000 nm. The thin film is produced by coating a temporary substrate (such as aluminum foil) with a coating material (such as copper) using any process. One such method is concentrated heat deposition or a combustion, chemical vapor deposition process. The resulting thin film provides a high level of adhesion to a final substrate, by embedding the nanostructures with the material of the final substrate (such as an epoxy resin). The surface of the thin film adjacent the temporary substrate substantially conforms to the substrate surface and has a relatively low peel strength. In this manner, the temporary substrate is easily removed from the thin film after attaching the opposite nanostructured side of the thin film to the final substrate with a resulting, higher peel strength.

L13 ANSWER 16 OF 18 USPATFULL on STN
AN 93:54809 USPATFULL
TI Conductive polymer film formation using initiator pretreatment
IN Han, Chien-Chung, Madison, NJ, United States
Baughman, Ray H., Morris Plains, NJ, United States
Elsenbaumer, Ronald L., Morris Township, Morris County, NJ, United States
PA Stewart, II, Richard C., Morristown, NJ, United States (U.S. individual)
PI US 5225495 19930706
AI US 1991-728908 19910710 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Welsh, Maurice J.
LREP Stewart, II, R. C., Fuchs, G. H., Webster, D. L.
CLMN Number of Claims: 40
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1996
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to a process for forming polyaniline films on a substrate and to composite articles formed by said process.

L13 ANSWER 17 OF 18 USPAT2 on STN
AN 2002:153998 USPAT2
TI Process of fabricating a circuitized structure
IN Jones, Gerald Walter, Apalachin, NY, United States
Keesler, Ross William, Endicott, NY, United States
Markovich, Voya Rista, Endwell, NY, United States
Rudik, William John, Vestal, NY, United States
Wilson, James Warren, Vestal, NY, United States
Wilson, William Earl, Waverly, NY, United States
PA International Business Machines Corporation, Armonk, NY, United States (U.S. corporation)
PI US 6739048 B2 20040525
AI US 2000-491755 20000127 (9)
RLI Division of Ser. No. US 1998-5182, filed on 8 Jan 1998, now patented, Pat. No. US 6131279
DT Utility
FS GRANTED
EXNAM Primary Examiner: Chang, Richard
LREP Scully, Scott, Murphy & Presser, Steinberg, Esq., William H.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 568
AB A process of fabricating a circuitized structure is provided. The process includes the steps of providing an organic substrate having circuitry thereon; applying a dielectric film on the organic substrate; forming microvias in the dielectric film; sputtering a metal seed layer

on the dielectric film and the microvias; plating a metallic layer on the metal seed layer; and forming a circuit pattern thereon.

L13 ANSWER 18 OF 18 USPATFULL on STN
AN 2001:123603 USPATFULL
TI Molded resin composition exhibiting good adhesion to conductive material on a surface
IN Funada, Yoshitsugu, Tokyo, Japan
Matsui, Koji, Tokyo, Japan
PA NEC Corporation, Tokyo, Japan (non-U.S. corporation)
PI US 2001011111 A1 20010802
AI US 2001-815059 A1 20010323 (9)
RLI Division of Ser. No. US 1997-986104, filed on 5 Dec 1997, GRANTED, Pat. No. US 6232398
PRAI JP 1996-325301 19961205
DT Utility
FS APPLICATION
LREP YOUNG & THOMPSON, 745 SOUTH 23RD STREET 2ND FLOOR, ARLINGTON, VA, 22202
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 626
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A resin matrix with resistances to alkali and acid includes at least any one of insulative organic particles and insulative composite particles having an organic component and an inorganic component with the total amount of these particles being in the range of 5-50% by volume, wherein the insulative organic particles and the organic component of the insulative composite particles are allowed to be corroded by either alkali or acid, and wherein not less than 90% by volume of the insulative organic particles and insulative component particles have a particle diameter in the range of 1-20 micrometers.

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